

*What Every Member of the  
Trade Community Should Know About:*

# Classification of Molds and Their Parts Under the HTSUS



AN INFORMED COMPLIANCE PUBLICATION

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**U.S. CUSTOMS and BORDER PROTECTION**

**NOTICE:**

This publication is intended to provide guidance and information to the trade community. It reflects the position on or interpretation of the applicable laws or regulations by U.S. Customs and Border Protection (CBP) as of the date of publication, which is shown on the front cover. It does not in any way replace or supersede those laws or regulations. Only the latest official version of the laws or regulations is authoritative.

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## PREFACE

On December 8, 1993, Title VI of the North American Free Trade Agreement Implementation Act (Pub. L. 103-182, 107 Stat. 2057), also known as the Customs Modernization or “Mod” Act, became effective. These provisions amended many sections of the Tariff Act of 1930 and related laws.

Two new concepts that emerge from the Mod Act are “***informed compliance***” and “***shared responsibility***,” which are premised on the idea that in order to maximize voluntary compliance with laws and regulations of U.S. Customs and Border Protection, the trade community needs to be clearly and completely informed of its legal obligations. Accordingly, the Mod Act imposes a greater obligation on CBP to provide the public with improved information concerning the trade community's rights and responsibilities under customs regulations and related laws. In addition, both the trade and U.S. Customs and Border Protection share responsibility for carrying out these requirements. For example, under Section 484 of the Tariff Act, as amended (19 U.S.C. 1484), the importer of record is responsible for using reasonable care to enter, classify and determine the value of imported merchandise and to provide any other information necessary to enable U.S. Customs and Border Protection to properly assess duties, collect accurate statistics, and determine whether other applicable legal requirements, if any, have been met. CBP is then responsible for fixing the final classification and value of the merchandise. An importer of record's failure to exercise reasonable care could delay release of the merchandise and, in some cases, could result in the imposition of penalties.

The Office of Regulations and Rulings (ORR) has been given a major role in meeting the informed compliance responsibilities of U.S. Customs and Border Protection. In order to provide information to the public, CBP has issued a series of informed compliance publications, and videos, on new or revised requirements, regulations or procedures, and a variety of classification and valuation issues.

This publication, prepared by the National Commodity Specialist Division, ORR, is a study of the classification of molds under the Harmonized Tariff Schedule of the United States (HTSUS). “Classification of Molds and Their Parts Under the HTSUS” provides assistance to importers in classifying molds under the HTSUS. We sincerely hope that this material, together with seminars and increased access to rulings of U.S. Customs and Border Protection, will help the trade community to improve voluntary compliance with customs laws and to understand the relevant administrative processes.

The material in this publication is provided for general information purposes only. Because many complicated factors can be involved in customs issues, an importer may wish to obtain a ruling under Regulations of U.S. Customs and Border Protection, 19 C.F.R. Part 177, or to obtain advice from an expert who specializes in customs matters, for example, a licensed customs broker, attorney or consultant.

Comments and suggestions are welcomed and should be addressed to the Assistant Commissioner at the Office of Regulations and Rulings, U.S. Customs and Border Protection, 1300 Pennsylvania Avenue, NW, (Mint Annex), Washington, D.C. 20229.

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The purpose of this publication is to assist importers in classifying molds under the HTSUS.

## INTRODUCTION TO THE CLASSIFICATION OF MOLDS

Molds are indispensable. From the bottle containing a consumer's favorite beverage to the most sophisticated components in the latest jet aircraft, molds are involved in the manufacture of products that are essential in every person's life.

*The Random House Dictionary of the English Language* (1973 Ed.) provides the following definition of a mold (as commonly defined): 1. A hollow form or matrix for giving a particular shape to something in a molten or plastic state, 2. That on or about which something is formed or made." Customs Headquarters ("HQ") went on to state in HQ 544147 dated July 5, 1988 that "a mold is ordinarily perceived as the item which gives final shape and form to the manufactured article." This definition, however, is too simplistic for tariff classification purposes. Molds range from simple single cavity/small-volume use types to complex multi-cavity/large-volume use types. Some may incorporate heating elements or features that allow for the changing of the mold's size. They can operate by methods such as injection, compression or gravity. Molds can be used by hand or in machinery such as injection molding machines.

As molds vary greatly in use, size, value and material of composition, so too do the Harmonized Tariff Schedule of the United States ("HTSUS") provisions vary. Molds cannot be relegated to one catch-all HTSUS provision. Specific provisions have been created to encompass the wide variety of molds that exist.

Heading 8480, HTSUS, provides as follows:

8480		Molding boxes for metal foundry; mold bases; molding patterns; molds for metal (other than ingot molds), metal carbides, glass, mineral materials, rubber or plastics:
8480.10.00	00	Molding boxes for metal foundry
8480.20.00	00	Mold bases
8480.30.00	00	Molding patterns
		Molds for metal or metal carbides:
8480.41.00	00	Injection or compression types
8480.49.00	00	Other types
8480.50.00		Molds for glass
	10	Injection or compression types
	90	Other types

8480.60.00		Molds for mineral materials
	10	Injection or compression types
	90	Other types
		Molds for rubber or plastics:
8480.71		Injection or compression types:
8480.71.10	00	For shoe machinery
8480.71.40	00	For the manufacture of semiconductor devices
8480.71.80		Other <sup>1/</sup>
	20	Temporarily imported for testing, calibration, examination, repair or alteration; returned after being exported for testing, calibration, examination, repair or alteration
		Other:
	45	Injection type
	60	Compression type
8480.79		Other types:
8480.79.10	00	Molds for shoe machinery
8480.79.90		Other
	10	Blow molds
	20	Bladder operated molds
	90	Other molds

Subheading 9902.84.19, HTSUS, provides as follows:

9902.84.19 <sup>1/</sup> Molds for use in the manufacture of digital versatile discs (DVDs) (provided for in subheading 8480.71.80)

**Note: The shaded area indicates that the provision has expired.**

The following information will provide the reader with some basic guidelines for classifying molds. It ranges from general to specific information that may prove helpful when faced with the task of determining which HTSUS provision is to be applied to a particular mold. It should be noted however that this list is not all-inclusive. Other material such as Office of Regulations and Rulings Headquarters ("HQ") and New York ("NY") Customs rulings, court decisions and product specific material (e.g., schematics, drawings, invoices, etc.) should also be used in conjunction with the tools cited below to arrive at the proper classification.

<sup>1</sup> See subheading 9902.84.19

## CLASSIFICATION TOOLS

***Harmonized Tariff Schedule of the United States (“HTSUS”)*** – For legal purposes, molds, as with all imported merchandise, are to be classified in accordance with the terms of the headings of the HTSUS, any relative section and chapter notes and, provided such headings or notes do not otherwise require, in accordance with the General Rules of Interpretation (“GRIs”) taken in order.

***Harmonized Commodity Description and Coding System Explanatory Notes (ENs or Explanatory Notes)***<sup>2</sup> – These notes are the official interpretation of the Harmonized System (HS) at the international level. The ENs are not dispositive nor are they legally binding. However, they do provide commentary on the scope of each heading of the Harmonized System. [See T.D. 89-80, published in the *Federal Register* August 23, 1989 (54 FR 35127, 35128)]

In addition, readers should also consult the Informed Compliance Publication (“ICP”) entitled *“What Every Member of the Trade Community Should Know About: Tariff Classification”* for additional aid in classifying molds. This publication is available on the Customs web site: <http://www.cbp.gov>.

## INVOICING

An invoice must contain complete and accurate information in order for the merchandise to be properly classified. The description cannot consist merely of one word, e.g., mold. The reader is advised to consult section 141.86, Customs Regulations, for general invoicing requirements. In addition, invoices for molds should state the mold’s material of composition (e.g., metal, ceramic, etc.), type of molding process used with the mold (e.g., injection, compression, etc.), molding material to be used with the mold (e.g., metal, plastics, etc.) and the article to be produced with the use of said mold.

## EXCLUSIONS

All relevant section and chapter notes must be considered before the proper classification of the mold in question can be determined. In the interest of brevity, this paper will deal only with the exclusionary notes that figure in the classification of molds.

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<sup>2</sup> The *Harmonized Commodity Description and Coding System Explanatory Notes - Second Edition* is © 1996 Customs Cooperation Council (working name: World Customs Organization (WCO)), Rue du Marché, B-1210 Brussels, Belgium.

## **Excluded By Virtue of Material of Composition**

An important factor to consider when classifying a mold is the mold's material of composition. A mold's material of composition often depends upon the application for which it will be used. Molds of ceramics, glass, graphite (or other carbon) or certain types of rubber are classified according to their constituent material. These molds are specifically precluded from classification in heading 8480, HTSUS, by virtue of the exclusionary language found in the legal notes to section XVI and chapter 84.

### **Graphite or Carbon Molds – Chapter 68, HTSUS**

[See note 1(a) to chapter 84]

### **Ceramic Molds – Chapter 69, HTSUS**

[See note 1(b) to chapter 84]

### **Glass Molds – Chapter 70, HTSUS**

[See note 1(c) to chapter 84]

### **Rubber Molds – Heading 4016, HTSUS**

In accordance with note 1(a) to section XVI, rubber molds are excluded from classification in heading 8480, HTSUS, if of vulcanized rubber other than hard rubber. However, not all types of rubber are rubber for tariff purposes. For example, silicone is often called silicone rubber, but is a plastic for tariff purposes. Type of rubber would have to be established in order to determine the proper classification.

[See note 1(a) to section XVI; EN 40.16(9)]

## **Precluded from Classification in Heading 8480, by Virtue of ENs' Exclusionary Language**

Molds specifically precluded from classification in heading 8480 by virtue of the exclusionary language found in EN 84.80 are:

### **Flongs, matrices and linotype molds – Heading 8442, HTSUS**

(Only the letterpress molds that cast separate characters, spaces, leads, etc. for stereotype printing blocks, and mold backings on the electrotpe plates are classified in heading 8480, HTSUS.)

### **Forms used in a manufacturing process whereby articles are produced by dipping the form into material – Classified According to Constituent Material**

Examples:

Molded Pulp Products – Mold/form in shape of the article to be produced is dipped into a vat of pulp. Mold is held in pulp for specified amount of time to allow the fibers from the pulp slurry to adhere to the mold. Pulp is

pressed onto the mold by either pressure applied to the slurry or a vacuum behind the mold. The finished product is then removed and dried. Products produced by this method include packing for eggs and plates for confectionery.

Other articles produced by the dip process include gloves.

**Ingot Molds – Subheading 8454.20.00, HTSUS**

Molds of this type are usually made of steel or iron. However, graphite, carbon or ceramic varieties are also available (chapters 68 and 69, HTSUS, applicable – see exclusions by virtue of material of composition listed above). Shape of the mold depends upon the shape (e.g., ingots or slabs) into which the molten metal will be provisionally cast. Molds may be of a one-piece variety or come in two halves.

**Continuous Casting Molds – Subheading 8454.90.00, HTSUS**

Example:

Copper mold tubes which are fixed size molds used in continuous casting operations. It should be noted that the language of the EN 84.80 states that the heading does include molds which produce blanks or finished articles. The continuous casting process, in which these copper mold tubes are used, produces semifinished products. Thus heading 8480, HTSUS, is not applicable. The copper mold tubes are classified as parts of the casting machines in subheading 8454.90.00.

(See HQ 952743, February 16, 1993)

(Also see HQ 953268, February 16, 1993; HQ 955700, December 8, 1994; NY 812234, July 18, 1995)

**Matrices and masters for the production of records – Heading 8524, HTSUS**

**Stamping dies – Heading 8207, HTSUS**

With stamping dies, molding material is shaped solely by means of a powerful blow or compression. In addition, the molding material is not retained in the die until it sets into a predetermined shape.

**Excluded By Virtue of Material Being Worked On**

When classifying a mold (i.e., either a separately imported mold or an excess/spare mold), all the above mentioned exclusions must be taken into consideration. (See section below on “Excess/Spare Molds” for discussion of a mold imported together with the machine with which it will be used.) Assuming the mold is not excluded by virtue of any of the above exclusions, one must then consider the principal use of the machine in which the mold will be used. The machine must be of a type for use solely or principally with a material mentioned in the provisions of heading

8480, HTSUS, i.e., metal, glass, minerals, rubber or plastics. This principal also holds true for a mold used manually, i.e., material being worked on determines whether or not the mold can be classified in heading 8480, HTSUS. Molds excluded from heading 8480, HTSUS, by virtue of exclusionary language to heading 8480, HTSUS, but not excluded from section XVI by virtue of any section XVI or chapter 84 notes are to be classified in accordance with note 2(b) to section XVI. If the mold is to be used on a machine which processes a material other than those enumerated in heading 8480, HTSUS, e.g., wax, the mold is to be classified as a part of the machine in which it will be used.

Examples:

**Molds for Wax - Heading 8479, HTSUS**

Also known as “wax pattern dies” are used on a wax injection machine. These machines employ a molding method known as “investment casting” (a.k.a. the “lost wax process”). These molds are not classified under heading 8480, HTSUS, as wax is not one of the materials mentioned in that heading.

(See HQ 957678, July 18, 1995; HQ 957375, April 19, 1995.)

**Molds Used in Industrial Preparation or Manufacture of Food – Heading 8438 HTSUS**

Molds used in continuous process bread-making

Molds for confectionery molding machines

Molds for chocolate molding machines

Molds for use in pasta making machines

(See NY E80832, April 22, 1999)

**Molds Used in Pharmaceutical Production – Heading 8479, HTSUS**

Molds for use in pharmaceutical tabletting press classified in subheading 8479.90, HTSUS.

## **CONFUSING TERMINOLOGY**

At times, merchandise described as a “mold” is not a mold for purposes of heading 8480, HTSUS. The most obvious examples are molds for the manufacture of penicillin and other antibiotics which are classified in heading 3002, HTSUS.

Other examples:

**Button Molds – Heading 9606, HTSUS**

A button mold is the interior part of certain types of buttons. These molds are designed to be covered with another material such as leather.

**Dies (a.k.a. “molds”)**

In order for a die to be classified as a mold, the die must retain the material until shape has been set. It cannot shape the material solely by means of a powerful

blow or compression such as stamping out sheet-metal goods. In addition, it must not be for the extrusion of molding material. If the die in question does not fall within these parameters, it cannot be classified in heading 8480, HTSUS.

Examples:

**Die Casting Dies (a.k.a. molds) – Subheadings 8480.41, HTSUS or 8480.49, HTSUS (Classification dependant upon type, i.e., injection, compression or other)**

A die casting die (mold) generally consists of a fixed die half mounted on the side toward the metal injection system and an ejector or movable die half which is mounted on the movable platen. Fixed and movable cores are often used in these types of dies.

**Dies for Animal Feed Pellets – Heading 8436, HTSUS**

Loose animal feed is compressed and pushed through the dies in order to produce pellets.

(See HQ 961408, November 24, 1998)

**Extrusion Dies Used to Extrude PVC Products - Subheading 8477.90, HTSUS**

(See NY C84912, March 12, 1998)

**Metal Molds – Heading 8207, HTSUS**

Dies used to die-stamp metal components

(See NY 875624, July 23, 1992)

**Pancake Molds – Heading 7615, HTSUS**

Nonstick, cast aluminum, pancake molds that can also be used as cookie cutters.

(See NY A80304, February 20, 1996)

**Plastic Moldings for Automobile – Heading 8708, HTSUS**

Shipments of these moldings are often misclassified as molds.

## **OTHER ISSUES**

### **Antiques**

Molds exceeding 100 years of age

Example:

Molds used in the production of hand cast toy soldiers and miniatures and which have been verified to exceed 100 years of age are classified in heading 9706, HTSUS.

## Condition as Imported

The physical state of a mold in its imported condition should also be considered.

### Blanks

Blanks is a term which refers to articles that while not ready for direct use have been worked to the point where the article has the approximate shape of the finished article. While unfinished, the article does possess the essential character of the finished article. In the case of an unfinished mold, providing the unfinished mold has the essential shape or outline of the finished mold, the unfinished mold would be classified as a mold.

[See EN for GRI (2)(a)(II)]

### Forged Alloy Steel Blocks

After importation, these blocks are cut to size and undergo various machining operations in order to produce finished molds. These blocks do not have the essential shape or outline of the mold at time of importation.

Example:

**Forged alloy steel blocks classified in heading 7228, HTSUS**

(See NY E85616, September 14, 1999; NY E85617, September 14, 1999)

## Excess/Spare Molds

When classifying a shipment consisting of a molding machine shipped together with a number of molds of varying sizes/dimensions, particular attention must be paid to GRI 2. In this case, the molds are to be classified in accordance with GRI 2(a). One must first determine how many molds are necessary for the operation of the machine. A small machine may only have the capability of producing one article at a time, thus only one mold is used. A large production machine may have the capability of producing multiple articles simultaneously, e.g., machine is capable of using six molds at one time. When shipped together with the machine with which it will be used, the specific number of molds required for the operation of the machine is classified together with the machine under the HTSUS subheading applicable for the machine itself. Excess/spare molds are classified in their respective headings. [See ENs, GRI 2(a)(VII)]

Example:

Importation consists of one blow molding machine for production of plastic bottles for carbonated drinks and three different molds which vary in shape and capacity. Molds must be changed each time a different shaped bottle is produced. The three molds cannot be used simultaneously. Machine and one mold only classified in subheading 8477.30.0000, HTSUS, which provides for blow-molding machines for the production of plastic products. Balance of two molds classified in subheading 8480.79.9010, HTSUS.

## **Lens Mold**

When classifying molds used in the production of spectacle (a.k.a. “eyeglass”) or contact lenses, a determination must be made as to the type of lens involved – glass or plastic. Molds used in the production of glass lenses are classified in subheading 8480.50.00, HTSUS, while molds used in the production of plastic lenses are classified in subheading 8480.71 or 8480.79, HTSUS, (depending upon the molding process used, e.g., injection, compression, etc.).

A contact lens mold which, in its imported condition, consists of a plastic mold containing a dry contact lens that will be subject to further processing and manufacturing operations in the United States, is subject to classification in two separate HTSUS headings. The essential function of the mold is to retain the unfinished dry contact lens (also a plastic material) in a predetermined shape and hold it in place until it is hydrated at the U.S. manufacturing facility. Only the mold is classified in subheading 8480.79.9090, HTSUS. The dry contact lens is not part of the mold but rather a separate entity in and of itself. The lens is separately classified in subheading 9001.30.0000, HTSUS. (See NY H81137, May 25, 2001; NY J89911, November 7, 2003.)

## **Preliminary Tableting Molds**

Heading 8480 also includes preliminary tableting molds that form molding powders into tablets which will be subsequently sent for final molding into the desired article. Care should be taken in identifying the specific powder being used in the process to ensure that the powder is of a material encompassed by heading 8480, HTSUS. In addition, one must distinguish between preliminary tableting molds and tableting molds that produce an article in its final form, e.g., molds for pharmaceutical tablets.

## **Sets Containing Molds**

Many times, a group of items will be imported as a “set”. In some instances, the “set” contains one or several molds. Assuming the group of items meets the requirements set forth in GRI 3(b) for “goods put up in sets for retail sale” [i.e., (1) consist of at least two different articles which are classifiable in different headings, (2) consist of articles put up together to meet a particular need or carry out a specific activity and (3) are put up in a manner suitable for sale directly to users without repacking], the group of items is classified according to the article which imparts the essential character to the set.

(See ICP entitled *“What Every Member of the Trade Community Should Know About: Classification of Sets”* for further information on sets.)

**Examples:**

Cable Splicing Kit - heading 3909, HTSUS

Essential character of this set consisting of thermoplastic mold, plastic sealing tape and casting resin imparted by the polyurethane casting resin.

(See HQ 083431, November 13, 1989)

Classification of Sets as Educational Toys under heading 9503, HTSUS

The individual set of articles, i.e., ball molds, ball powder and a water dropper, for the production of balls, when imported retail packed, are considered educational toys for tariff classification purposes.

(See PD D89144, April 9, 1999)

The individual set of articles, i.e., plastic molds, measuring cup, wire whisk, mixing spoon, bases, plastic dessert sticks and instructions for the preparation of dessert, when imported retail packed, are considered educational toys for tariff classification purposes.

(See NY D83618, November 9, 1998)

## **TERMS COMMONLY USED IN MOLDING INDUSTRY**

Readers are advised to familiarize themselves with the terminology used in the casting and molding industries. A working knowledge of the terms is essential in order to classify molds correctly. Following is a list of some of the basic terms used:

**Bottom Board (a.k.a. Bottom Plate)** – See Flask.

**Cavity** - depression into which molding material flows. The cavity gives the external shape to the article being produced.

**Casting** – a metal article conforming to the shape of a mold's cavity(ies). The article is formed by a process of pouring or injecting liquid metal into a mold. See Processes/Casting.

**Cheek** – See Flask.

**Cope** – the outer portion of a mold. See Flask.

**Drag** – the bottom section of a flask. See Flask.

**Flash** – a thin piece of excess molding material. This can be found around air vents or separation lines.

**Flask** – frame of steel or wood which is used to hold molding sand around pattern. A flask is generally made of two sections – drag section/lower half and cope section/upper half. At times, a third section is added between the cope and the drag sections. This

third section is called the cheek section. The bottom of the flask is called the bottom board or plate.

**Gate** – opening at end of runner (See runner).

**Mold (a.k.a. Moulds)** – a cavity into which a molding material is poured or injected in order to shape it into a desired shape. Among the various types of molds are:

**Dry-sand mold** - sand mold that is dried prior to being filled with the molding material (generally liquid metal).

**Green-sand mold** – sand mold that is not dried prior to being filled with the molding material (generally liquid metal). This type of mold is composed of moist molding sand.

**Permanent mold** – mold used repetitively for the production of multiple articles of the same shape/specifications.

**Plunger** – ram which forces molding material into die.

**Processes, Molding** – The following is not meant to be an all-inclusive listing of the methods used in the molding industry. Rather it is a random sampling to demonstrate the variety of methods available to the industry.

**Blow Molding** – Process involves the injection of air or gas into a parison (a.k.a. “rough blank”) in order to expand the parison. This expansion forces the material against the sides of the mold, thus forming a hollow article having a desired shape (e.g., bottle).

**Casting** – The basic difference between casting and molding lies in the type of molding material used in the process. Casting generally uses molten material while molding processes generally use materials in granular or powder form.

Examples of the various types of casting processes available are:

**Centrifugal** - Process involves the use of a rotating cylindrical mold. The molding material is thrown against the walls of the mold by centrifugal force and as it solidifies, the material takes on the desired shape.

**Continuous** – Process involves the use of an ingot mold. The process is continuous in that it does not cease after a pre-determined length of time. The solidified ingot is continually sheared and removed as soon as it is cast. The process differs from static ingot casting in that molding material is continuously being added as the material at the other end solidifies. In the static casting process, an appropriate amount of material is generally

introduced into the mold only at the beginning of the process. No new material is added as the material solidifies into the desired shape.

Other casting processes include casting under pressure, casting to shape (in addition to centrifugal, this category also includes sand, permanent-mold and die) and zero gravity casting.

**Compression** - Molding material is loaded into a mold cavity. The heat and pressure applied in the closed mold cause the material to conform to the shape of the mold's cavity. Plastic is hardened into its final state as a result of an internal chemical reaction. Compression molding is generally used for processing thermosetting material.

**Dip** – Mold in shape of the article to be produced is dipped into a vat of molding material, e.g., pulp. Mold is held in molding material for specified amount of time to allow the material to adhere to the mold. Molding material is pressed onto the mold by either pressure applied to the material or by vacuum behind the mold. The finished product is then removed and dried.

**Extrusion** – Softened-molding material is forced through a die, thus producing the desired shape. Products made by the extrusion process include pipes and tubing.

Extrusion processes include:

**Blown Film Extrusion** – air pressure is applied to a tube of plastic as it is being extruded in order to produce a thin gauge plastic film.

**Injection** – Molding material is injected into a cold mold where it solidifies and takes the shape of the mold cavity(ies).

**Investment** – See Lost Wax.

**Lost-wax** – Wax is injected into a metal form to create a pattern with the specifications of the desired article. The solidified wax pattern (a.k.a. "investment") is removed from the metal form and repeatedly dipped in ceramic slurry. It is subsequently coated with sand until a hard shell or mold is formed. The next step involves heating the mold. This allows the wax to melt. After the melted wax is drained out, molten metal is poured into the space vacated by the wax. After cooling, the mold is removed leaving behind the metal which has hardened into the desired shape.

**Metal Injection** – Metal injection molding is a combination of the thermoplastic injection molding process and the powder metallurgy process whereby material is shaped by means of injection type molds.

**Rotational** – Molding material (powder or liquid) is placed in a mold which rotates continuously about its axes to uniformly coat the inner surface of the

mold. The rotating mold first passes through a heated oven where the plastic is fused and then through a cooling chamber. Hollow molded article, such as a hollow ball, is removed after cooling operation. When liquid material is used, process is often referred to as “slush molding”. It should be noted that slush molding not limited to the production of footwear (See E. Dillingham, Inc. v. United States, C.D. 4082).

**Slush** – See Rotational

**Thermoforming** – Thermoforming is the forming of an article from a sheet of plastics by the application of heat and pressure or vacuum. Pressure forces the molding material (softened by the heat) into the mold thus producing the desired shape. Vacuum molding is the forming of an article from a sheet of plastics by application of heat and vacuum. As the air between the sheet and the mold is evacuated, the sheet is pressed against the mold face thus producing the desired shape.

**Transfer** – See Compression

Transfer molding is similar to the compression molding process. However, unlike the compression process in which the mold itself is heated, in transfer molding the molding material first goes to a separate preheating chamber. When the material has reached the appropriate fluidized state, it is transferred under heat and pressure into a closed mold. Transfer molding is generally used for processing thermosetting material.

**Riser (a.k.a. feeder or feeder head)** – feeds liquid metal to the casting to compensate for shrinkage of the liquid metal that is occurring as it cools and solidifies.

**Runner** – channel cut into one or both halves of the mold along which molding material runs into the mold’s cavity(ies).

**Thermoplastic** – plastics material that requires heat to make it conform to a desired shape. A thermoplastic differs from a thermoset in that it can be reheated and reformed numerous times, thus enabling scrap to be reclaimed and reprocessed. Examples include PVC and polystyrene.

**Thermoset** – plastics material that requires heat to make it conform to a desired permanent shape. A thermoset differs from a thermoplastic in that once the shape is set, the material generally cannot be remelted or reformed. Examples include phenolics and ureas.

## DISCUSSION OF SPECIFIC TARIFF PROVISIONS

Assuming a mold under consideration has not been excluded from heading 8480, HTSUS, by virtue of any of the above mentioned notes, the mold is classified in accordance with the terms of heading 8480, HTSUS. Heading 8480, HTSUS, includes

molds which are electrically or otherwise heated. The EN 84.80 provides that the heading encompasses all molds (subject to the above-mentioned exclusions) provided the molds are used in the production (either manual or mechanical) of blanks or finished articles. Molds may operate by means such as gravity, injection or compression.

### **Molding Boxes for Metal Foundry – Subheading 8480.10, HTSUS**

Molding boxes for metal foundries are round or rectangular frames. Sand molds are formed in molding boxes by packing a mixture of sand and clay around a pattern. They can have features such as hinged sections or removable ends which facilitate the removal of molds from the boxes. The boxes are usually manufactured from cast iron or steel.

### **Mold Bases – Subheading 8480.20, HTSUS**

A mold base is a plate physically located on the bottom of a mold.

### **Molding Patterns – Subheading 8480.30, HTSUS**

This subheading encompasses items such as patterns and core boxes to be used in the preparation of sand molds.

Examples:

Patterns are models made of either wood, metal or some other easily worked material. A pattern is shaped to the same configuration as the desired casting. The moistened sand/clay mixture is firmly packed over the face of the pattern to form the desired cavity. When the pattern is removed, a cavity is left in the sand. The result of this operation is an actual production mold. Molten metal is subsequently poured into the cavity which has been molded to the desired shape of the pattern. When solidified, the sand mold is broken and the casting removed.

Core boxes are molds used for the production of sand cores. The core-boxes are hardened steel complete with ejector plates and pins. These boxes are generally fitted onto sand injection machines that are fired with gas to cure the sand cores. After the sand is baked, the cores are used to create openings and various shaped cavities in a casting.

### **Molds for Metal or Metal Carbides – Subheadings 8480.41, HTSUS and 8480.49, HTSUS**

Examples:

Die Cast Dies

As noted previously, in order for a die to be classified as a mold, the die must retain the material until shape has been set. It cannot shape the material solely by means of a powerful blow or compression such as stamping out sheet-metal goods. In addition, it

must not be for the extrusion of molding material. Assuming the die meets all of the above requirements, it is classified in heading 8480, HTSUS.

**“Squeeze Casting” Mold**

Mold used in a “squeeze casting” process is considered to be an injection or compression type of mold. Molds of this type are used to produce articles such as aluminum automotive parts.

(See NY A86776, September 3, 1996)

**Molds for Glass – Subheading 8480.50, HTSUS**

**Example:**

A blank mold is used in a process where an individual molten glass gob is dropped into the blank mold. Once in the blank mold, the gob takes a rough shape (a.k.a. “parison” or “rough blank”) of the article to be produced, e.g., a glass bottle. After the desired features have been formed, the article is passed to the blow mold where the article is blown to final form. Both the blank mold and the blow mold in this instance are classified in subheading 8480.50.00, HTSUS. However, care should be taken in identifying the specific material being used in the process to ensure that the mold is used solely or principally with a glass material. If the blow mold is for use with a plastic material, the blow mold is classified in subheading 8480.79.9010, HTSUS.

**Molds for Mineral Materials – Subheading 8480.60, HTSUS**

**Examples:**

Molds used to mold concrete into pre-determined structural shapes may also be referred to as **“forms” or “formwork”**. These forms are usually used to shape concrete in the construction industry, e.g., for walls, ceilings and pillars. They can also be used to form cylindrical forms such as bases for traffic lights. The forms are usually stand-alone units which do not require a machine for operation.

(See HQ 083273, March 10, 1989 and NY B88647, August 18, 1997)

Mold (a.k.a. die) used in the production of automotive disc brake pads.

(See NY 856876, October 24, 1990)

Dental Impression – The impression is in and of itself a mold as it will be used to make a dental mold. Articles of general use such as a mold are classified in their respective headings even though they may be used by a dentist.

[See NY 817484, January 16, 1996 and EN 90.18(II)]

(Also see HQ 087328, September 26, 1990; NY 861238, March 18, 1991; NY 869319, December 23, 1991; NY A87892, October 17, 1996; NY B88647, August 18, 1997; NY C87923, May 29, 1998; NY E86595, September 24, 1999)

## **Molds for Rubber or Plastics – Subheadings 8480.71, HTSUS and 8480.79, HTSUS**

### **Subheadings 8480.71.1000, HTSUS, and 8480.79.1000, HTSUS Molds for Shoe Machinery**

In order to qualify for either one of these duty-free provisions, a mold must be used on a machine with features unique to a shoe machine. One has to distinguish between the physical characteristics of the machine on which the molds will be used from a general purpose molding machine. Shoe machinery features a last carrier mechanism which holds a last, i.e., a model of the foot upon which the shoe/boot is formed. When determining whether or not the machine qualifies as shoe machinery, one should consider the commercial/economic feasibility of changing the molds. With general purpose molding machines, the customary practice of the industry is to change molds frequently in order to produce a wide variety of articles. In this case, changing the molds is generally an inexpensive operation.

### **Subheading 8480.71.4000, HTSUS, Molds for the manufacture of semiconductor devices**

On December 13, 1996, the United States, Australia, Canada, Chinese Taipei, the European Communities, Hong Kong, Iceland, Indonesia, Japan, Korea, Norway, Singapore, Switzerland and Turkey signed the Information Technology Agreement (“ITA”). Presidential Proclamation 7011 (reflecting the provisions of the World Trade Organization Ministerial Declaration on Trade in Information Technology Products) dated July 1, 1997, contained the details necessary to implement the tariff concessions granted by this Agreement. Included in the scope of the products eligible under the ITA are molds used in the manufacture of semiconductor devices (i.e., diodes, transistors, and similar semiconductor products, or integrated circuits, of headings 8541, HTSUS, and 8542, HTSUS).

### **Subheading 8480.71.8020, HTSUS - Molds temporarily imported for testing, calibration, examination, repair or alteration; returned after being exported for testing, calibration, examination, repair or alteration**

Effective January 1, 1997, this subheading was added to the HTSUS to address the problem of an overstatement of U.S. mold imports on the U.S. import statistics. Prior to the implementation of NAFTA, molds being continuously moved between countries (primarily between the United States and Canada) for purposes of testing, calibration, examination, repair or alteration were usually imported temporarily free of duty under bond (“TIB”). Once NAFTA was implemented, entries were being made under the regular HTSUS number, duty free if all NAFTA requirements were met. Counting the same mold multiple times resulted in a distortion of the trade statistics. The use of subheading 8480.71.8020, HTSUS, when appropriate, allows for the proper identification of these particular molds for statistical purposes. It eliminates the possibility of counting the same mold multiple times.

When classifying a mold of this type, subheading 9802.00.50, HTSUS, must also be taken into consideration. Subheading 9802.00.50, HTSUS, provides for articles

returned to the U.S. after having been exported for repairs or alterations. Articles eligible for this provision are entitled to a partial duty exemption with duty assessed only upon the cost or value of the foreign repairs or alterations. This is in contrast to a mold classified in subheading 8480.71.8020, HTSUS, where duty is assessed on the full value of the mold, plus the cost of the repair or alteration.

In order to determine the proper classification, subheading 8480.71.8020, HTSUS, or subheading 9802.00.50/8480.71.8045, HTSUS, (or “60” depending upon whether injection or compression type), one has to determine whether the mold is “complete” or “incomplete” for its intended use. HQ 957375, April 19, 1995 explains in detail how these terms are to be interpreted for purposes of headings 8480, HTSUS, and 9802, HTSUS. As stated in the cited ruling, “Subheading 9802.00.50, HTSUS, treatment is also precluded where the exported articles are incomplete for their intended use and the foreign processing operation is a necessary step in the preparation or manufacture of finished articles.”

**Example #1:**

A mold is manufactured in Canada to the specifications of the U.S. customer. The Canadian manufacturer ships the completed mold to its U.S. customer for examination and testing. The U.S. customer finds the mold does not conform to his specifications and returns the mold to the Canadian manufacturer for calibration or alteration. After performing the requested work, the mold is again shipped to the U.S. customer for examination and testing. Subheading 8480.71.8020, HTSUS, applies as the mold in this case is not a finished article.

Each time it comes into the United States for examination and testing the mold is closer to being a finished good but it is still not complete. It will not be finished until it finally conforms to all the customer’s specifications.

**Example #2:**

An injection mold becomes worn out due to repetitive use in the United States. The owner decides to return it to the original foreign manufacturer for repair. The repaired mold is returned to the owner in the United States. Subheading 9802.00.50/8480.71.8045, HTSUS, applies.

A mold was complete when sent abroad and complete when returned to the United States. The repair operation did not result in a new or commercially different article nor change the character or use of the mold. The mold was merely restored to proper working order.

**Subheadings 8480.71.8045, HTSUS**

**Example:**

Molds/forms used in injection molding press machines to mold granules generated from a tire recycling operation into flooring tiles and flooring rolls.

(See NY 810729, June 14, 1995)

(Also see HQ 951242, June 22, 1993; HQ 962000, June 15, 1999; NY 816218, November 9, 1995; NY C85027, April 2, 1998, NY F84678, April 17, 2000)

**Subheading 8480.71.8060, HTSUS**

Compression type – a simple compression mold is usually comprised of two plates. With the plates apart, a crude-rubber compound is placed in the cavity. The two mold halves are put together and compressed in a hydraulic press. Molds of this type are used in the production of vehicle tires.

**Subheading 8480.79.9010, HTSUS**

Blow molds are used in the production of thin-walled, hollow articles such as bottles. Care should be taken in identifying the specific material being used in the process to ensure that the blow mold is used solely or principally with a rubber or plastics material. If the blow mold is used solely or principally with a glass material, the blow mold is classified in subheading 8480.50.0090, HTSUS.

**Subheading 8480.79.9020, HTSUS**

A bladder operated mold is so named because it incorporates either an air-inflated or a hot water-inflated bag. During the production of tires, the bag presses the tire against the mold.

**Subheading 8480.79.9090, HTSUS**

This subheading covers molds for rubber or plastics not listed in subheadings 8480.71.1000, HTSUS, through 8480.79.9020, HTSUS, inclusive.

Examples:

Rotational molds used in rotational molding process. Transfer molds used in the transfer molding process.

**Molds for Use in the Manufacture of Digital Versatile Discs (DVDs) -  
Subheading 9902.84.19, HTSUS**

Section XXII of the HTSUS consists of two chapters, i.e., Chapters 98 and 99, which were reserved for national use by individual countries. Chapter 99 contains provisions which reflect legislation and executive and administrative actions. For purposes of this publication, only subheading 9902.84.19, HTSUS, will be discussed as it directly affects the classification of certain types of molds. Should the reader wish to delve further into the intricacies of the HTSUS, a more in-depth discussion on the Harmonized Commodity Coding System can be found in the Informed Compliance Publication (“ICP”) entitled *“What Every Member of the Trade Community Should Know About: Tariff Classification.”*

Public Law 106-476 (114 Stat. 2101) (also known as the “Tariff Suspension and Trade Act of 2000”) was enacted on November 9, 2000 and became effective on November 24, 2000. Among the temporary duty suspensions and reductions encompassed by said public law was an amendment to the HTSUS, i.e., the insertion of subheading 9902.84.19, HTSUS, to provide for a temporary duty suspension through

December 31, 2003 for molds for use in the manufacture of digital versatile discs (DVDs). Pursuant to section 1207 of this act, these particular molds, if entered during the period specified (i.e., on or before December 31, 2003), are subject to duty at the rate set forth in subchapter II of chapter 99 rather than at the rate provided for in subheading 8480.71.80, HTSUS. Molds meeting the terms of subheading 9902.84.19, HTSUS, are free of duty.

**Note: The shaded area indicates that the provision has expired.**

## **PARTS OF MOLDS AND OTHER RELATED ARTICLES**

The most important rule to remember when classifying parts of molds is that **there is no provision for parts or accessories of molds under heading 8480, HTSUS**, even if the part is designed and dedicated for use solely with a particular mold. The language of heading 8480, HTSUS, is clear on this point. However, it should be noted that **this rule does not apply** to the ingot molds and continuous casting molds of heading 8454. The language of heading 8454, HTSUS, encompasses “parts of” as well as complete ingot and continuous casting molds.

Examples:

### **Chaplets—Classification Dependant Upon Machine In Which Mold Will Be Used**

Metal supports used in mold cavity to maintain the proper position of parts of the mold (e.g., internal core) that are not self-supporting.

### **Core for Die Casting Machine - Subheading 8454.90.0030, HTSUS**

Core for die casting die (mold). When the molded article is removed from the die casting machine, it will have an opening that has the shape of the core.  
(See NY F88310, June 23, 2000)

### **Die Inserts for Use in Pasta Molds – Subheading 8438.90.9015, HTSUS**

Used in the production of pasta shapes in pasta making machines.  
(See NY E80147, April 21, 1999)

### **Hot Runner System – Subheading 8477.90.8510, HTSUS**

Internal component of a hot runner injection mold. The system consists of a series of heated channels which maintain the proper processing temperature for the molding material. Molten molding material exiting through the nozzle of the injection molding machine is conveyed through these channels into the mold's cavity(ies). A basic system consists of gates, heaters, manifolds, nozzles, temperature controllers and thermocouples. Depending upon the type of heating to be utilized (i.e., direct or indirect), other components, such as band heaters for direct heating, can be added.  
(See NY 861890, April 19, 1991)

**Stainless Steel Susmic Aramid Kevlar Fiber Woven Fabric – Heading 7326, HTSUS**

Used as an insulating material for molds in an automobile glass manufacturing line.

(See HQ 962337, June 16, 1999)

**CONCLUSION**

Classification of goods is a complex task. By familiarizing oneself with the above basic guidelines, the reader will be able to make an informed classification determination when dealing with an importation of a mold, thus ensuring the proper assessment of duties and the accuracy of import statistics.

## **ADDITIONAL INFORMATION**

### **The Internet**

The home page of U.S. Customs and Border Protection on the Internet's World Wide Web, provides the trade community with current, relevant information regarding CBP operations and items of special interest. The site posts information -- which includes proposed regulations, news releases, publications and notices, etc. -- that can be searched, read on-line, printed or downloaded to your personal computer. The web site was established as a trade-friendly mechanism to assist the importing and exporting community. The web site also links to the home pages of many other agencies whose importing or exporting regulations that U.S. Customs and Border Protection helps to enforce. The web site also contains a wealth of information of interest to a broader public than the trade community. For instance, on June 20, 2001, CBP launched the "Know Before You Go" publication and traveler awareness campaign designed to help educate international travelers.

The web address of U.S. Customs and Border Protection is <http://www.cbp.gov>

### **Customs Regulations**

The current edition of *Customs Regulations of the United States* is a loose-leaf, subscription publication available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402; telephone (202) 512-1800. A bound, 2003 edition of Title 19, *Code of Federal Regulations*, which incorporates all changes to the Regulations as of April 1, 2003, is also available for sale from the same address. All proposed and final regulations are published in the *Federal Register*, which is published daily by the Office of the Federal Register, National Archives and Records Administration, and distributed by the Superintendent of Documents. Information about on-line access to the *Federal Register* may be obtained by calling (202) 512-1530 between 7 a.m. and 5 p.m. Eastern time. These notices are also published in the weekly *Customs Bulletin* described below.

### **Customs Bulletin**

The *Customs Bulletin and Decisions* ("Customs Bulletin") is a weekly publication that contains decisions, rulings, regulatory proposals, notices and other information of interest to the trade community. It also contains decisions issued by the U.S. Court of International Trade, as well as customs-related decisions of the U.S. Court of Appeals for the Federal Circuit. Each year, the Government Printing Office publishes bound volumes of the *Customs Bulletin*. Subscriptions may be purchased from the Superintendent of Documents at the address and phone number listed above.

## Importing Into the United States

This publication provides an overview of the importing process and contains general information about import requirements. The February 2002 edition of *Importing Into the United States* contains much new and revised material brought about pursuant to the Customs Modernization Act ("Mod Act"). The Mod Act has fundamentally altered the relationship between importers and U.S. Customs and Border Protection by shifting to the importer the legal responsibility for declaring the value, classification, and rate of duty applicable to entered merchandise.

The February 2002 edition contains a section entitled "Informed Compliance." A key component of informed compliance is the shared responsibility between U.S. Customs and Border Protection and the import community, wherein CBP communicates its requirements to the importer, and the importer, in turn, uses reasonable care to assure that CBP is provided accurate and timely data pertaining to his or her importation.

Single copies may be obtained from local offices of U.S. Customs and Border Protection, or from the Office of Public Affairs, U.S. Customs and Border Protection, 1300 Pennsylvania Avenue NW, Washington, DC 20229. An on-line version is available at the CBP web site. *Importing Into the United States* is also available for sale, in single copies or bulk orders, from the Superintendent of Documents by calling (202) 512-1800, or by mail from the Superintendent of Documents, Government Printing Office, P.O. Box 371954, Pittsburgh, PA 15250-7054.

## Informed Compliance Publications

U.S. Customs and Border Protection has prepared a number of Informed Compliance publications in the "*What Every Member of the Trade Community Should Know About:...*" series. Check the Internet web site <http://www.cbp.gov> for current publications.

## Value Publications

*Customs Valuation under the Trade Agreements Act of 1979* is a 96-page book containing a detailed narrative description of the customs valuation system, the customs valuation title of the Trade Agreements Act (§402 of the Tariff Act of 1930, as amended by the Trade Agreements Act of 1979 (19 U.S.C. §1401a)), the Statement of Administrative Action which was sent to the U.S. Congress in conjunction with the TAA, regulations (19 C.F.R. §§152.000-152.108) implementing the valuation system (a few sections of the regulations have been amended subsequent to the publication of the book) and questions and answers concerning the valuation system. A copy may be obtained from U.S. Customs and Border Protection, Office of Regulations and Rulings, Value Branch, 1300 Pennsylvania Avenue, NW, (Mint Annex), Washington, D.C. 20229.

*Customs Valuation Encyclopedia* (with updates) is comprised of relevant statutory provisions, CBP Regulations implementing the statute, portions of the Customs Valuation Code, judicial precedent, and administrative rulings involving application of valuation law. A copy may be purchased for a nominal charge from the Superintendent of Documents, Government Printing Office, P.O. Box 371954, Pittsburgh, PA 15250-7054. This publication is also available on the Internet web site of U.S. Customs and Border Protection.

The information provided in this publication is for general information purposes only. Recognizing that many complicated factors may be involved in customs issues, an importer may wish to obtain a ruling under CBP Regulations, 19 C.F.R. Part 177, or obtain advice from an expert (such as a licensed Customs Broker, attorney or consultant) who specializes in customs matters. Reliance solely on the general information in this pamphlet may not be considered reasonable care.

Additional information may also be obtained from U.S. Customs and Border Protection ports of entry. Please consult your telephone directory for an office near you. The listing will be found under U.S. Government, Department of Homeland Security.

## **“Your Comments are Important”**

The Small Business and Regulatory Enforcement Ombudsman and 10 regional Fairness Boards were established to receive comments from small businesses about Federal agency enforcement activities and rate each agency’s responsiveness to small business. If you wish to comment on the enforcement actions of U.S. Customs and Border Protection, call 1-888-REG-FAIR (1-888-734-3247).

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